(No Model.)

J. L. KWAREL.

BOW FACING OAR AND OAR LOCK.

No. 330,841. Patented Nov. 17, 1885.

Fig. 1.

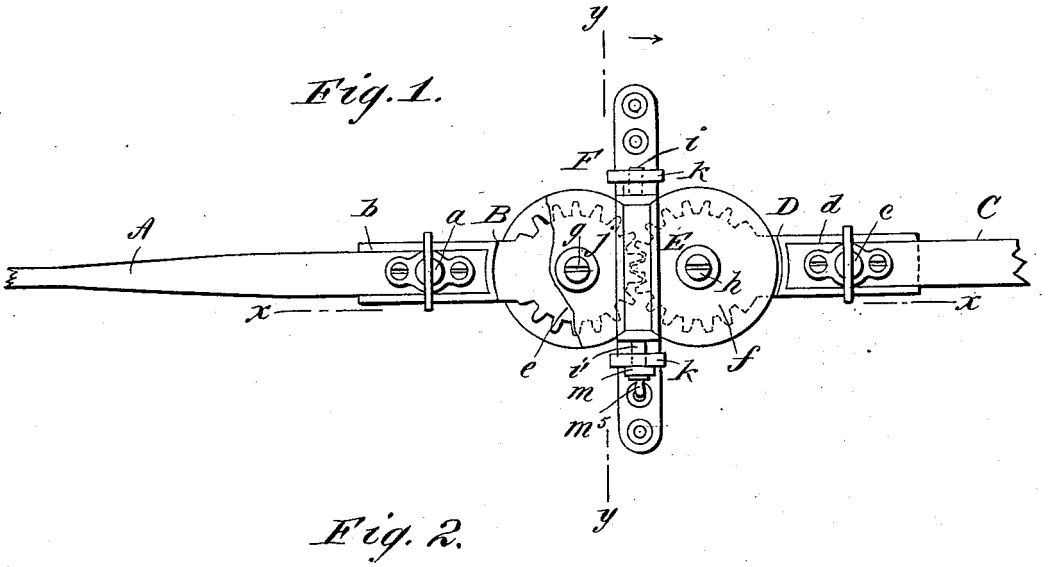


Fig. 2.

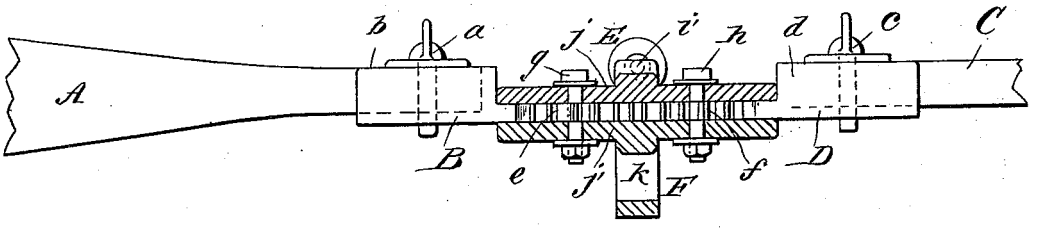
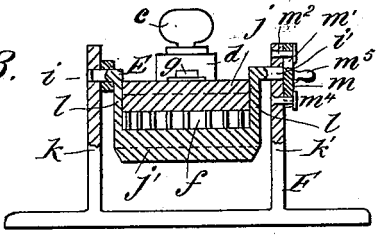


Fig. 3.



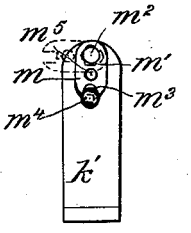


Fig. 4.

WITNESSES:

Cornelius Keenan

C. Sedgwick

INVENTOR:

J. L. Kwarel

BY Munn & Co.

ATTORNEYS.

UNITED STATES PATENT OFFICE.

JACOB LEVI KWAREL, OF NEW YORK, N. Y., ASSIGNOR TO HIMSELF AND LUDWIG ROTH, OF SAME PLACE.

BOW-FACING OAR AND OAR-LOCK.

SPECIFICATION forming part of Letters Patent No. 330,841, dated November 17, 1885.

Application filed August 6, 1885. Serial No. 173,737. (No model.)

To all whom it may concern:

Be it known that I, JACOB L. KWAREL, of the city, county, and State of New York, have invented a new and Improved Bow-Facing Oar and Oar-Lock, of which the following is a full, clear, and exact description.

My invention relates to that class of bow-facing oars wherein are employed cogged sections composing the oar fulcrumed upon a coupling-plate; and the invention consists, principally, in such construction of the coupling-plate that the oar will hang low in the oar-lock to give the user better control of the oar and more purchase.

The invention also consists of the special means employed for locking the oar or the coupling-plate in the oar-lock.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a broken plan view of my new oar and oar-lock. Fig. 2 is a sectional elevation taken on the line *x x* of Fig. 1. Fig. 3 is a transverse sectional elevation taken on the line line *y y* of Fig. 1, and Fig. 4 is a detailed end view of the oar-lock.

This invention will first be described in connection with the drawings, and then pointed out in the claims.

A represents the oar-blade. This is of wood, and is secured to the metal blade-holder B by the screw *a*, the holder B being by preference formed with the socket *b*, to receive the blade, as shown. The hand-piece or handle C of the oar is also of wood, and is secured by a screw, *c*, to the holder D, the same being formed with a socket, *d*, to receive the handle. The holders B D are each formed with a circular cogged or toothed plate marked, respectively, *e f*, and are coupled together by the coupling E and bolts *g h*, so that the teeth or cogs of the plates *e f* intermesh with each other, as shown clearly in Fig. 1, so that the movement of the handle C and holder D on the bolt *h* will communicate a reverse motion to the holder B and blade A. The coupling E is composed of the upper and lower plates, *j j'*, and is pivoted in the uprights *k k'* of the rowlock F by the centrally-placed trunnions *i i'*, formed at the upper ends of the upwardly-projecting plates *l l*, formed with or secured to the lower plate, *j'*. By means of the plates *l* the oar is hung low in the rowlock, and the trunnions *i i'* permit the oar to rock vertically in the lock, so that the blade A may be dipped into and raised from the water by raising and lowering the handle C, as with ordinary oars.

For securing the oar in the rowlock, I provide the upright *k'* of the rowlock with the button or pivoted plate *m*, that is adapted to close over the end of the trunnion *i'*, and thus prevent the oar from shifting sidewise. By turning this plate *m* to one side, as shown in dotted lines in Fig. 4, the trunnion *i'* is free to move through the upright *k'*, so that the oar may be readily removed from and replaced in the rowlock. The plate *m* is slotted at *m'* and placed on the headed stud m^2, that passes through the slot, and the said plate is notched at m^3 at its lower end to engage with the stud m^4, for locking the plate in position to hold the oar, and the said plate *m* is provided with the knob or handle m^5, by which it may be conveniently raised and lowered to permit the removal and replacement of the oar. By removing the screws *a c* the blade A and handle C may be detached, so that the oar may be packed in small space, and these parts can be easily replaced, if broken.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with the coupling having lateral trunnions and the oar supported by said coupling, of the oar-lock having standards *k k'*, having bearings for the trunnions of the coupling-pin m^4, projected from the outer side of standard *k'*, the plate *m*, having near one end a slot, *m'*, and provided in its other edge with a notch, m^3, fitted to engage pin m^4, and a headed pin, m^2, passed through slot *m'* and securing plate *m* to the standard, all arranged substantially as described, whereby the plate *m* may be moved on the pin m^2 and adjusted into or out of engagement with pin m^3 and be locked over or adjusted clear of the trunnion-bearing in standard *k'*, as and for the purposes specified.

2. The combination of the oar-lock having bearings, the coupling provided with trunnions journaled in said bearings, and a latch movable over the outer end of one of said bearings and adjustable at right angles to such bearing, all arranged substantially as described, whereby the latch may be adjusted over the bearing to secure the coupling in the lock or away therefrom to permit the lateral detaching movement of said coupling, as and for the purposes specified.

3. The improved bow-facing oar-support, substantially as herein described and shown, consisting of the coupling having top and bottom plates, *j j'*, the gears journaled between said plates and adapted to support, respectively, the oar-blade and handle, the arms *l*, projected up from the opposite sides of the bottom plate, *j'*, and provided at their upper extremities with lateral trunnions, the standards *k k'*, having bearings for such trunnions, the plate *m*, having a slot, *m'*, near one end, and provided in its opposite end with a notch, m^3, a pin, m^2, passed through slot *m'* and connecting the standard and plate *m*, so the latter can move longitudinally, and a pin, m^4, projected from standard *k'* on the opposite side of the trunnion-bearing thereof from pin m^2 and in position to be engaged by the notch m^3 of plate *m*, all arranged and operating substantially as set forth.

his
JACOB LEVI × KWAREL.
mark.

Witnesses:
H. A. WEST,
C. SEDGWICK.